University of Tripoli
Faculty of Information Technology

Department of Software Engineering

Regular Expression

Introduction to Internet Programming
ITGS 226 -- F 2021

By: Fatima Ben Lashihar

REGULAR EXPRESSION

- Regular Expressions, commonly known as "**regex**" or "**RegExp**", are a specially formatted text strings used to find patterns in text.

- It can be used to verify whether the format of data i.e. name, email, phone number, etc. entered by the user was correct or not, find or replace matching string within text content, and so on.

- Regular expression syntax includes the use of special characters. The characters that are given special meaning within a regular expression, are: `. * ? + [ ] ( ) { } ^ $ | \`. You will need to backslash these characters whenever you want to use them literally.

2

REGULAR EXPRESSION
Character Classes

RegExp	What it Does
[abc]	Matches any one of the characters a, b, or c.
[^abc]	Matches any one character other than a, b, or c.
[a-z]	Matches any one character from lowercase a to lowercase z.
[A-Z]	Matches any one character from uppercase a to uppercase z.
[a-Z]	Matches any one character from lowercase a to uppercase Z.
[0-9]	Matches a single digit between 0 and 9.
[a-z0-9]	Matches a single character between a and z or between 0 and 9.

3

REGULAR EXPRESSION
Predefined Character Classes

Shortcut	What it Does
.	Matches any single character except newline \n.
\d	matches any digit character. Same as [0-9]
\D	Matches any non-digit character. Same as [^0-9]
\s	Matches any whitespace character (space, tab, newline or carriage return character). Same as [\t\n\r]
\S	Matches any non-whitespace character. Same as [^ \t\n\r]
\w	Matches any word character (definned as a to z, A to Z,0 to 9, and the underscore). Same as [a-zA-Z_0-9]
\W	Matches any non-word character. Same as [^a-zA-Z_0-9]

4

REGULAR EXPRESSION
Repetition Quantifiers

RegExp	What it Does
p+	Matches one or more occurrences of the letter p.
p*	Matches zero or more occurrences of the letter p.
p?	Matches zero or one occurrences of the letter p.
p{2}	Matches exactly two occurrences of the letter p.
p{2,3}	Matches at least two occurrences of the letter p, but not more than three occurrences of the letter p.
p{2,}	Matches two or more occurrences of the letter p.
p{,3}	Matches at most three occurrences of the letter p

5

REGULAR EXPRESSION
Position Anchors

RegExp	What it Does
^p	Matches the letter p at the beginning of a line.
p$	Matches the letter p at the end of a line.

6

THE END

7